

Dear Locati Edge Team,

My name is Aaron Diaz, I am 18 years old and have lived here in the great state of Montana with my mother, father and brother my whole life. I lived most of my life in Belgrade MT going to Belgrade Public Schools. We had a house out in the country with a little bit land where my brother and I learned to ride dirt bikes which is where I discovered I really like to work on mechanical things. We moved to Bozeman right before I turned 14 and was able to get my first job where I would ride my bike to work. It gave me a great feeling of freedom and accomplishment to work and make my own money.

My whole life I have had a love for anything mechanical but what has always interested me the most is automotive mechanics. The way an engine works and how every part has a function and if that part is not functioning properly then it can cause failure of the whole engine. In pursuit of this fascination, I got myself a job working at O'Reilly Auto Part as a part salesman. I worked at this job for about a year and 4 months. Then in late spring 2021 I was offered a job at a local engine rebuilding shop named Engine Machine and Supply. My job was to disassemble customers engine, clean all the parts, and then inspect all the part for wear and or failure. I really enjoyed this job but sadly the owners decided to retire, and they sold all the equipment. Luckily, I was able to get a job with one of the owner's friends who runs a small diesel engine machine shop named Diesel Engine Machine Technologies, which was my most recent employment. This would be the topic of which I am writing to you on.

I have recently acquired a 2002 Chevy Silverado 2500hd with the LB7 6.6 Duramax diesel engine, there is just one problem. The truck has 250,000 miles on it and the engine has low compression. This means that the engine is worn out and needs to be rebuilt. I traded my dad a truck I bought from one of my friends because he did not want to rebuild the motor. The truck I got from my dad is a rare and very sought-after body style, so it is worth it to me to rebuild it. Duramax diesels are very complicated and expensive. This would be a very challenging yet fun project for me that would help me expand on my skill set.

I have successfully pulled, rebuilt, and reinstalled the engine in my 1984 Toyota pickup. I bought that truck in 8<sup>th</sup> grade for \$500 dollars out of a field in Belgrade. It had a 22r 4-cylinder engine that was completely worn out and had a blown head gasket. Once the motor was out, I spent about \$1,200 dollars on the engine reinstalled it with a few upgrades to improve longevity and fuel economy. So, for \$1,800 dollars I got myself a great running truck that is fuel efficient, will get me to work every day and last me a very long time. My goal is to do the same thing with my Duramax. Having this truck would be beneficial for me for pulling trailers and do other miscellaneous heavy-duty work that my Toyota cannot. Another huge goal is to have it to pull my off-road trucks to different parts of the state to get out and explore nature and ride dirt bikes.

To rebuild the Duramax, I need to start with pulling the engine, this starts with unhooking and unbolting all the accessories and then the motor. The cab will also need to be lifted off the frame to allow more space to unbolt and lift the motor out. This step will take approximately 10 hours. Once the engine is pulled, I can disassemble it in my garage and then take it to the machine shop to have the surface decked, the cylinders bored and honed to the next piston size and rebuild the heads. After I get the block and heads back from the machine shop, I can reassemble the engine in my garage. I will also be buying all my parts from the machine shop. Engine reassembly is very tedious and time-consuming process. Assembly will take me approximately 6 to 8 hours. Reinstallation will take roughly the same

amount of time as removal. Parts that get replaced will include pistons, bearings, bushings, gaskets, oil pump, and injector cups, these are all parts that are inside of the assembled engine. All the accessory parts that get replaced include pullies, water pump, injectors, high pressure fuel pump, glow plugs, power steering pump, turbocharger rebuild, oil and antifreeze. Finally, after everything is put back together and the truck is started, the motor can be broken in and then the truck is ready for use.

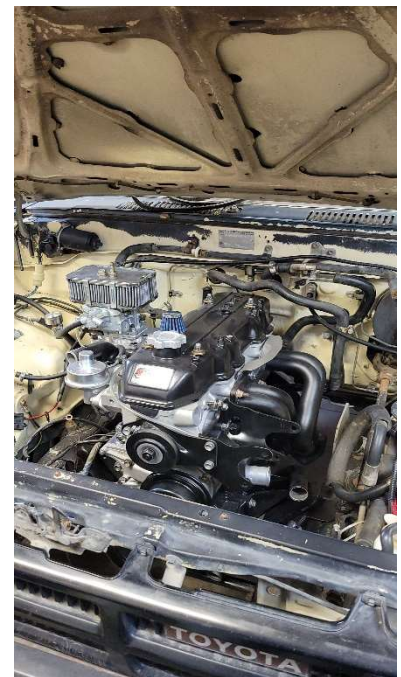
To have a shop repair the truck for me would be extremely expensive and not as fun or as much of a learning experience as doing it myself. Taking on this project will save me money and help me achieve my goals of expanding my knowledge and skills in engine rebuilding. If I were to have a shop repair my truck, I could be looking at a \$22,000-dollar repair bill, if I do it myself, I believe I can do it for \$12,000 dollars. I am between jobs right now and don't have a lot of money saved up right now but still want to have fun this summer off-roading, dirt biking, camping and exploring the outdoors. After my dad told me about the Locati Edge Program, I decide to seize this opportunity to get help with funding. So, I ask you, the Locati Edge Team, if you could possibly sponsor me on this project of mine? I would like to still pay for what I can, but if your team could pay the machine shop bill which will be approximately \$8,477 dollars that would get the truck up and running for me. I thank you very much for taking the time to read my letter and consider me for the Locati Edge Program.

Sincerely,

Aaron Diaz



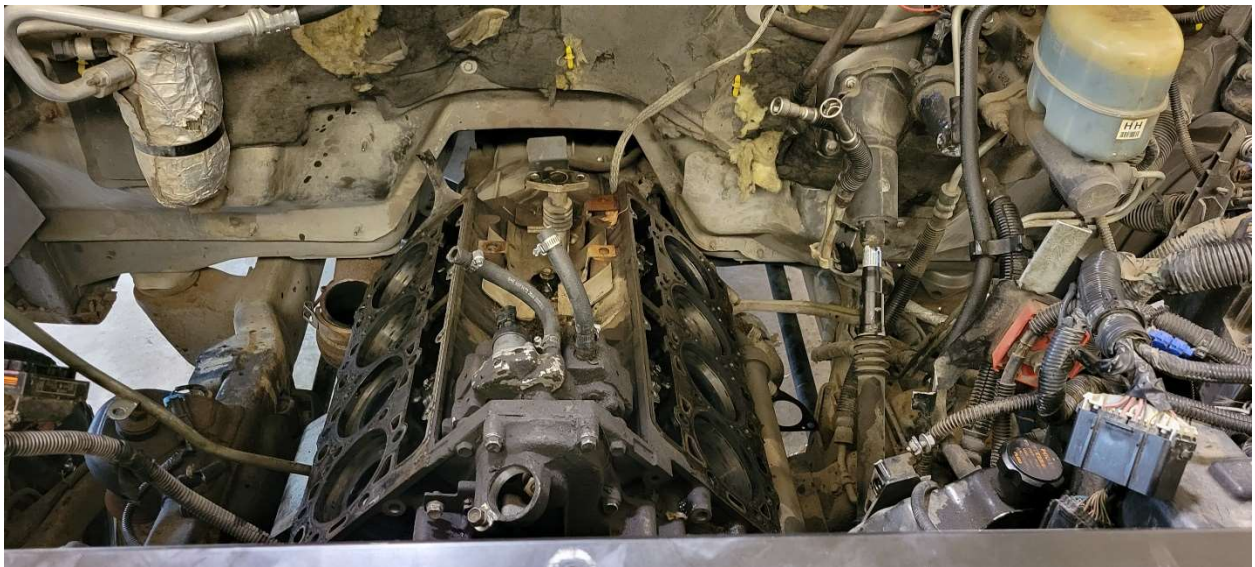
Me standing next to my 1984 toyota pick-up during engine removal



Eninge reinstalled after rebuild



Me standing next to my 2002 Duramax



My Duramax as it sits



Belgrade, TN 37017  
 (406) 813-8910  
 info@dmtenines.com

Name / Address
arrow diaz

			Project
Description	Qty	Rate	Total
jet wash block		75.00	75.00
magnaflux block		50.00	50.00
pressure test v block		150.00	150.00
Gap rings		180.00	180.00
bore v-8 with torque plates		570.00	570.00
Surface v-8		180.00	180.00
install cam bearings		50.00	50.00
clean heads		80.00	80.00
cut seat	32	15.00	480.00
install valve guides	32	10.00	320.00
surface heads (pair)		120.00	120.00
balance rotating assembly		400.00	400.00
arp head studs		678.14	678.14
mobile kit		1,600.00	1,600.00
oil pump pinand		562.50	562.50
damper		540.00	540.00
duramax guide	32	2.09	66.88
machine for screw in cups		700.00	700.00
clean & magnaflux crank		75.00	75.00
polish crank, key crank and cam		425.00	425.00
check rod	8	12.50	100.00
R/R wrist pin bushing	8	18.00	144.00
LB7 screw in cups		855.40	855.40
pin bushing	8	9.50	76.00
<b>Thank you for your business!</b>		<b>Total</b>	<b>\$8,477.92</b>

Me from machine shop (DEMT Performance)